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# FEDERAL VALUATION OF THE RAILROADS IN THE UNITED STATES

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The United States Supreme Court has repeatedly held that in the regulation of rates the common carrier is entitled to earn a return upon the value of the property employed by it in the public service, and is not limited to the original cost thereof or the amount the carrier has invested therein. The Interstate Commerce Commission in its first annual report and frequently since has recommended that steps should be taken to ascertain the value of the railroads; such information being deemed essential:

To obtain a trustworthy estimate of the relation existing between the present worth of railroad property and its cost to its proprietors;

In determining whether rates as fixed by the government are confiscatory;

In connection with railway taxation;

In the ascertainment of a proper depreciation reserve;

In testing the accuracy of the balance sheets of the carriers;

To the organization of railway statistics in general;

In determining whether the railroads are under or over-capitalized.

In 1910 Congress had under consideration a bill to regulate the issuance of securities of railroad companies, but instead of taking action authorized the appointment of a commission to study and report with reference thereto. The commission, headed by President Arthur T. Hadley of Yale University, advised in its report submitted in 1911 against such legislation pending a valuation of the property used in interstate commerce; the report was probably most influential in causing the passage of the Valuation Act approved March 1, 1913.

The act as passed was very different from and was a development of a bill providing for the valuation of the physical property of the railroad companies. As such it was known as a bill "providing for physical valuation," and passed the House of Representatives in that form, but underwent a radical change in the hands of the Senate sub-committee, providing as reported, for the ascertainment of the value of all of the property of a carrier including

what was specifically designated in the act as "other values and elements of value," thus specifically providing for the value of the railroad as a going concern, as distinguished from a mere appraisal of the physical elements composing it.

It was generally believed at the time of the passage of the act that the work involved constituted the greatest economic study ever undertaken, but even those most interested and best informed under-estimated the cost and the time necessary for the work. The Congress which passed the act was informed that the work would be done in from three to five years at a cost of six to ten millions of dollars. The recital of what has since occurred will clearly demonstrate the inaccuracy of these estimates, and the indication two and one-half years after the passage of the act are that the work will cost the government and the railroads somewhere near fifty millions of dollars and will take at least ten years.

Most legislation regulatory of corporations requires reports by the corporations to the governing body. One of the most important features of the Valuation Act requires the carriers to "coöperate with and aid the commission in the work of valuation," in addition to furnishing maps, contracts, reports, etc.

In order that this coöperation may be rendered in the most systematic and helpful manner, the railroad companies selected a committee of eighteen railroad presidents to represent them in this work. That committee at the request of the commission has from time to time appointed engineering, land, and accounting committees to consider with the Division of Valuation the principles and innumerable details connected with the work. The commission was fortunate in having one of its members willing to devote his entire time to the work, in consequence of which Mr. C. A. Prouty resigned from the commission and was appointed Director of Valuation. Upon his recommendation the commission divided the United States into five districts, and has created administrative boards of engineers, land attorneys, and accountants of five members, one member for each district. The commission also appointed an advisory board to act in a supervisory capacity and aid in the solution of the more important questions.

A solicitor was likewise designated to supervise the legal work of the government, and the railroad companies have created a committee of counsel. The legal features of the work are of great

importance; the amount of detail and the expenses involved require that care should be taken to see that it is done in conformity with the requirements of the act.

Notwithstanding the realization by the representatives of the government and the railroad companies that a valuation could not be made until a decision had been reached upon the many important principles involved, it was decided to proceed with the onerous task of inventorying in detail as required by the act, all of the property, as it was felt that in solving the problems arising in connection therewith, the experience thus obtained would be a valuable aid in reaching a correct decision upon the principles involved.

The method of inventorying was considered by the Engineering Board of the government, which held a number of conferences with the engineering committee representing the carriers. The carriers offered to make and submit inventories of their properties, but the government representatives concluded that they would prefer maps showing the lands of the carriers and the improvements thereon, and to make their own measurements. While agreeing that the maps of the lands should be furnished, the carriers urged and still feel that an inventory furnished by them of their improvements would be far more serviceable than any map, which could not be more than a picture of their improvements. The government has since partially recognized this contention by an order empowering the Director of Valuation to require the carriers to furnish an inventory of their improvements in terminals and other congested districts. Notwithstanding this fundamental difference of view as to procedure the carriers are successfully aiding the government in its work. The field parties of the government are accompanied by a representative of the carrier who points out the property and assists in the correct ascertainment of the quantities by furnishing the government with detailed plans of structures, and by the production of records where they exist. This is essential where the ascertainment of the amount of work done is not readily observable from the surface conditions, as in the case of foundations extending far below the present surface of the ground, and where the amount of work in graduation is difficult to determine by reason of the change in surface conditions in adjacent territory.

The commission wisely proceeded experimentally with a few field parties until such a time as experience had demonstrated

the nature of the best organization thereof, and the number that could be properly supervised by such a headquarters organization as could well be created. At the present time the government is surveying about 4,000 miles of road a month, the number of miles varying in different sections of the country depending upon whether it is thickly settled or otherwise and whether of a flat or mountainous nature, the number of tracks and the quantities and character of the railroad under inspection.

As the commission had only \$500,000 at its disposal from March 1, 1913 to June 30, 1914, it was not in a position to do a large amount of field work. For the year ending June 30, 1915, it had \$2,300,000. Now, however, it is estimated that with the continuation of the present appropriation of \$3,000,000 per annum it will be able in four years from January 1, 1916, to survey most of the 250,000 miles of railroad in the United States. As the government has not undertaken, however, any work upon the trunk line railroads with two, three or four tracks, I do not believe the government will be able to complete the work within that time.

Experience has shown that the greatest progress is made where the carrier prepares for the work by a year's investigation prior to the commencing of field work by the government forces. The Director of Valuation has, therefore, prepared a tentative program so that the carriers may know when to expect the government to commence the work on their roads. It is not only helpful to the government, but partially avoids the creation and maintenance of an unnecessary organization upon the part of the railroad company prior to the time when it should commence work of preparation for the government.

The selection and education of the railroad representatives generally known as pilot engineers is one of the most important features of the work. These men should have sufficient time at their disposal, before beginning of work by the government forces, to become thoroughly familiar with both the records and the physical property of the portions of the railway which are assigned to them.

The government and the railroads early recognized that in order to avoid endless disputes upon many of the details it would be important to agree upon the facts while the inventory is being made. It was therefore arranged that where a carrier coöperated by sending its representative along with the government field parties

that the carrier should receive a copy of the notes taken by the government field parties, and that these notes should be checked by the carrier and any exception taken thereto within a limited period of time. No arrangement has so far been made for the settlement of disputes or where the exception is taken by the carrier if the government notes do not record all of the facts. It is, however, expected that provision therefor will be made in the near future.

After the calculation and assembling of quantities comes the application of prices in order to make an inventory. It is contended that there ought not to be differences that cannot be adjusted with reference to quantities, but it is conceded that the determination of prices offers the opportunity for wide differences of opinion. The prices of labor and material vary in different parts of the United States, and vary from time to time. The lowest prices usually occur in periods of business depression during which there is little railroad construction. The prices of some materials have a tendency steadily upward and a few have uniformly decreased, and others widely fluctuate, but it is believed that a study of records over a sufficient period of time will disclose (except where there is a pronounced tendency in one direction) an average price prevailing during a period of five or ten years, which, when modified by the trend, will indicate what prices should be fairly applied for materials. The amount to be allowed for labor is, however, more difficult. That proposition may be most easily illustrated by the statement that from fifty cents to one dollar more per day is paid in some classes of construction work than for similarly described occupations in the more steady and less exacting railroad maintenance work. This is partially explained by the permanency of employment in connection with maintenance work as distinguished from the temporary character and somewhat more hazardous and hard nature of construction work.

The Valuation Act requires that the commission shall ascertain and report to Congress the original cost, the cost of reproduction new, and the cost of reproduction less depreciation. The commission has found that the records of many carriers are very meager or have been destroyed by fire or lost in consolidations, and that it is therefore impossible to so comply, as to original cost, with the act in the case of those carriers, and that the cost of doing so in the case of the others is almost prohibitive. One original estimate of the

cost of valuing the railroads was as low as \$10 per mile. In one case the commission expended \$110 a mile in investigating the original cost of a railroad constructed within the last twenty years.

The determination of correct principles, which is so important from an economic standpoint, is perhaps best illustrated by the difficulty in valuing the land and the treatment of the question of depreciation. Substantial differences of opinion now exist between the government and the carriers on these subjects, and it may prove to be unfortunate that the act seemingly makes no provision for the testing in the courts of the legal principles involved, until after a valuation has been completed. The Valuation Act is specific in its requirements as to what the commission shall ascertain and report as to what the railroad companies paid to acquire their lands and as to the methods employed by the commission in determining the present value thereof. It contains no detailed directions, however, with reference to depreciation. The necessity, which was so long ago recognized, of economical transportation facilities caused all state legislatures to provide for a means of acquisition by railroad companies of property and property rights in order that railroads might be constructed upon proper alignment and reasonable grades. The rights of way owned by the railroad companies were thus acquired where the owner and the representatives of the railroad company could not agree as to the value of the property taken. Recognizing that the benefit to the community of a railroad by the most direct available route might deprive property owners of something more than the mere proportionate part represented by the area of the part taken of the value of his property as a whole, the legislatures and the courts have invariably held that the owner should be paid the difference between the value of his property before and after the taking of the part of his property by the railroad company. The railroad company thus acquired not merely a parcel of land, but property rights, the value of which must now be ascertained in finding the value of the property as a whole. The difficulty of determining these property values is generally recognized, and is fully dealt with in the brief recently filed by the railroad companies with the Interstate Commerce Commission.

The difficulty in connection with depreciation is largely caused by the failure to distinguish between deterioration and depreciation as commonly understood. Deterioration is a change from a con-

dition of newness. Such a change is bound to occur, and in large and complex properties like a railroad which takes several years to complete, so that many of the minor items, such as ties, entering into its construction even at the time the property is first put into operation, are not absolutely new. In a railway maintained in the best possible condition, all of its parts cannot be new at any one time. To call this change depreciation and deduct from the cost of putting the part in place is to immediately declare that the value of the investment is less than the cost necessary to create the property.

Parts of a complex property like a railroad do not all wear out at once, and so long as they are replaced from time to time when replacement is due, the property as a whole has not depreciated. This is strikingly true of a roadbed which has a greater value when properly maintained after years of use than it had when first constructed. In order to operate trains over the railroad with safety and speed, the roadbed must become settled, which takes several years; the ballast and ties and rails in the track must become adjusted by work which can only be done as time, labor and the action of the trains and the elements bring about the solidified condition of the roadbed. Time also demonstrates that changes are desirable that are not due to mere maintenance. Some parts of the property become inadequate or obsolete, and while possessing structural strength to perform the work for which they were designed, it is not longer desirable to keep them in service from an economic standpoint. For this reason even in the best and most properly maintained railroad properties, renewal funds have of late years sometimes been created where earnings would permit of the setting aside of a sum therefor. The creation of such a fund, however, should not be taken as depreciation in the property as it exists. Unless public policy would permit the creation of such a fund, or the earning of a rate sufficient to care for such expenditures, the replacements would have to be wholly paid for by the issuance of new capital. To so provide for the cost would be unwise because it would be uneconomical and would build up a disproportionate capitalization. The development of our transportation machine has been so rapid in recent years that statistics, unless very carefully analyzed, are misleading, for there has not been a proper distinction in accounting between expenditures which are for the replacement of parts in the



maintenance and the replacement by the more efficient instrument. It is important in this connection to keep in mind the past practice of the carrier with respect to the creation of the renewal fund where any has been created and the future policy of the regulating body with reference thereto.

But few railroad properties exist today in the form in which they were originally constructed. The business of the past did not justify such vast expenditures as are now made, but there is frequently the question as to whether the most economical way of producing the property in its present condition would not involve, even at the present time, the construction of at least some of the property which is not now in service, and which is designated as abandoned property. The consideration of such expenditures is one of the problems of the commission in determining present cost of the reproduction of the property.

The Interstate Commerce Commission had up to September 15 last served upon the carriers twenty orders in connection with the valuation work. While the time allowed to comply therewith is less in the judgment of the railroad representatives than is reasonably necessary, the effort in all cases is being made to comply. They provide for maps and profiles, inventory of stock materials and supplies, for schedules of land and equipment and the original cost thereof, and for a great number of schedules of prices paid by the carriers for materials and labor. Other orders call for information relating to abandoned property, and for information as to ownership of industrial side tracks not located on the right of way or station grounds of the railroad companies; for reports as to aids, gifts, grants and donations, and for the preparation of a corporate history to be illustrated by a chart and accompanied by a descriptive statement. For convenience of reference, but not deemed of any importance in determining value, the carriers are required to make reports as to portions of the property that they have leased, and inventory their minute books and accounting and other records. In order to keep the inventory when made up to date, provision is made for keeping a record of additions and betterments and extensions, also deletions. Such a correction of the inventory, however, will not disclose the value of the property, as its condition, earnings and other factors are vital elements at any time in determining the value.

As there is much earnest discussion and doubt as to whether the valuation work when completed will serve any useful purpose, I express the opinion that when the work is completed the results will convince the public that the railroad properties in the United States are worth much more than their present capitalization.